2003 International Residential Code (IRC) Update

Regional Plan Review

Chapters 1 and 2: Administration and Definitions			
Code Section		**Section Title**	**Change**
2003	**2000**		
R101.3	R101.3	Purpose	Section has been rewritten to reflect the purpose as written in the IBC.
R202	R202	Definitions	Includes new definitions for the following: Aspect ratio, fiber cement siding, masonry heaters, portable fuel cell appliance, stationary fuel cell power plant, structure, sunroom addition, vapor permeable membrane, and winder.
Chapters 3: Building Planning			
R301.1.3	R301.1.2	Engineered design	Adds text, which permits engineered design in accordance with the IBC.
Table R301.2(1)	Table R301.2(1)	Climatic and geographic design criteria	Column added for ice shield underlayment requirement.
R302.1	R302.1	Exterior walls	Restricts projections within 2 feet of the line used to determine fire separation distances.
R303.2	R303.2	Adjoining rooms	Revised to provide ventilation requirements for sunrooms and patio covers.
R303.4.1	**NEW**	Intake openings	Mechanical and gravity outside air intake openings are required to be located a minimum of 10 feet from sources of hazardous or noxious contaminants **or** 2 feet below the source.
R303.6	R303.4	Stairway illumination	Requires artificial light for interior stairs to be not less than 1 foot-candle at center of treads and landings.
R303.8	R303.6	Required heating	Revised to prohibit the use of portable space heaters to achieve compliance.
R304.3	R304.3	Minimum room sizes	Kitchens are now listed as an exception to the 70-square-foot minimum area requirement.
R305.1	R305.1	Minimum height	Requires the ceiling height in bathrooms above plumbing fixtures to be at least 6 feet 8 inches. Also stipulates 30 inches by 30 inches space required at the showerhead.
R308.4	R308.4	Hazardous locations	Item #10 has been rewritten. Item #11 applies when the surface of the glass is less than 60 inches “above the nose of the tread”.
R309.2	R309.2	Separation required	Garages with habitable rooms above them shall be separated from the room with at least 5/8 inches Type X gypsum board or equivalent (installed perpendicular to framing in accordance with Table R702.3.5).
R311	R311	Means of egress	R311 has been reorganized to include doors, landings, under-stair protection, hallways, stairways, handrails, and ramps. Section R311.4.3 (Landings at doors) has two rewritten exceptions: Exception 1, the reference to sliding doors was deleted, and exterior stairways of two or fewer risers, other than the required exit door, are exempt from landing requirements. Exception 2, the maximum 8-inch rise for thresholds at exterior door landings has been revised to 7-3/4 inches. Section R311.5.2 changes the minimum tread width required for winders, including winders at circular stairs, from 11 inches to 10 inches, as measured from the narrow side. Section R311.5.4 limits each flight of stairs to a vertical rise of 12 feet between floor levels or landings. Section R311.5.6 requires handrails on at least one side of stairs with four (previously two) or more risers. Section R311.5.6.3 handrail grip size requirements have been completely rewritten and include classifications of Type I and II handrails.
Three Steps No Handrail Required			
R312.2	R316.2	Guardrail opening limitations	Ladder effect restriction removed. On open-sided stairs, opening restriction changed to 4-3/8 inches.
R314.2.7	R318.2	Foam plastics/Sill plates and headers	New section allows spray-applied foam plastic application to sill plates and headers, but restricts density and thickness of application.
R315.4	**NEW**	Alternate Test Method	Allows wall and ceiling finishes to be tested in accordance with NFPA 286 (as an alternative to flame spread and smoke developed index requirements tested in accordance with ASTM E84).

R319.1	R323.1	Protection against decay/Location required	Exception 2 revised to require all wood framing (previously only studs and plates) which rests on concrete or masonry exterior foundation walls and is less than 8 inches from exposed ground to be pressure preservative treated.
R322.1	R326	Accessibility/Scope	New language specifies that where there are four or more dwelling or sleeping units in a single structure, Chapter 11 (Accessibility) of the IBC applies.
R323.1.5	R327.1.5	Protection of mechanical and electrical systems	Many mechanical, plumbing, electrical, and fuel gas sections have been revised to refer to this section for locations and installations of equipment and systems in areas prone to flooding.
R323.3.4	**NEW**	Walls below design flood elevation	New section addresses components that penetrate walls designed to break away under flood loads.
Chapter 4: Foundations			
R401.1	R401.1	Foundation/ Application	Revised to limit the applicability of the prescriptive requirements of the IRC to foundations in which the intervals between interior basement and foundation walls do not exceed 50 feet.
Table R403.1	Table R403.1	Minimum width of concrete or masonry footings	Increases the width requirements for footings constructed on soils with bearing capacities of 1,000, 2,000, and > 4,000 psi.
R403.1.4 R403.1.4.1	R403.1.4	Minimum depth Frost protection	These code sections have been revised and expanded to exempt foundations in the following structures from the requirements to extend below the frost line: 1) Decks not supported by a dwelling unit. 2) Freestanding accessory structures < 400 feet in area **or** with an eave height < 10 feet.
R403.3	R403.3	Frost-protected Shallow foundations	This section has been revised and Sections R403.3.1, R403.3.1.1, and R403.1.2 have been added to provide prescriptive requirements for frost-protected shallow foundations attached to: unheated slab-on-ground structures; heated structures; and foundations extending below the frost line in accordance with Section R403.1.4.
R408.3	R408.3	Access (crawl space)	Access to the crawl space through the perimeter wall has new minimum dimensions of 16 inches by 24 inches. Such access cannot be located directly under a doorway.
Chapter 5: Floors			
R502.3.3	**NEW**	Floor cantilevers	This new section contains prescriptive requirements for cantilevered wood joist design. Cantilevered portions of wood joists are not to exceed the depth of the member or values as set forth in Table R502.3.3(1). Backspan requirement is 3 to 1.
R502.4	R502.4	Joists under bearing partitions	Joists under bearing partitions are to be adequately sized to support the loads imposed. (Double joists may no longer be adequate under some conditions).
R506.2.3	R506.2.3	Vapor retarder	Vapor barrier requirements beneath concrete slab-on-grade construction deleted for garages.
Chapter 6: Wall Construction			
Table R602.3	Table R602.3	Fastener schedule	Adds new language to “Note a” which addresses minimum average bending yield strengths.
R602.6.1	R602.6.1	Drilling and notching of top plate	Attachment method has changed for the required tie on a top plate notched > 50 percent. Six 16d nails changed to eight 16d nails.
R611	R611	Insulating concrete form wall construction	This section and its subsections have been significantly revised and expanded to address the irregularly limitations given in Chapter 3 and to expand the limits for wind and seismic conditions.
Chapter 7: Wall Covering			
R702.1	R702.1	Interior covering/ General	Revised to reference Table R703.4 for interior masonry veneer construction, with exceptions for waterproofing and drainage requirements.
R702.4.2	R702.4.2	Ceramic tile/ Gypsum backer	Revised to prohibit installation of water-resistant gypsum board over a vapor retarder in a shower or tub compartment.
Table R703.7.3	Table R703.7.3	Allowable spans for lintels supporting masonry veneer	Revised to include spans for 5/16 inch thick steel lintels.

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Chapter 8: Roof-Ceiling Construction			
R802.1.3	R802.1.3	Fire-retardant-treated wood	Completely rewritten.
R802.10.5 R802.11	**NEW**	Truss-to-wall connection Required strength of truss or rafter connections to resist wind uplift forces	Requires truss-to-wall connectors, which are subject to wind pressures of less than 20 psf to be capable of resisting a minimum uplift of 175 pounds. Table R802.11 is completely rewritten.
Chapter 9: Roof Assemblies			
R905.2.7.1	R905.2.7.1	Ice protection	Allows the jurisdiction to mandate ice protection by inserting the requirement in Table R301.2(1). Unconditioned detached accessory structures are now exempt from ice barrier requirements. New ice shield reference for underlayment indicated in Sections R905.4.3, R905.5.3, R905.6.3, R905.7.3, and R905.8.3.
R907.3	R907.3	Reroofing/ Recovering versus Replacement	Existing asphalt shingles no longer must be removed prior to reroofing in areas prone to severe hail damage.
Chapter 10: Chimneys and Fireplaces			
R1001.6.1	**NEW**	Spark arrestors	New section provides requirements for spark arrestors.
R1003	R1003	Masonry fireplaces	Some sections have been rearranged. New opening sentence for steel fireplace units. New section on dampers requires they be located a minimum of 8 inches above the top of the fireplace opening.
R1006	**NEW**	Masonry heaters	A masonry heater shall be installed according to: • The terms of its listing; or ASTM E1602
Chapter 11: Energy Efficiency			
N1101.1	N1101.1	Scope	Exempts unconditioned portions of structures from compliance with Chapter 11 where separated by building envelope assemblies from the remainder of the building, but still requires compliance with the chapter's provisions for provisions for building, mechanical and service water heating systems.
N1102.1	N1102.1	Thermal performance criteria	Revised to limit the use of the IECC to Chapters 4 and 5 for building envelope compliance.
N1102.1.11	**NEW**	Recessed lighting fixtures	New prescriptive requirements for recessed lighting fixtures installed in the building envelope.
Chapter 12: Mechanical Administration			
N/A	M1201.3	Conformity	Deleted without substitution.
Chapter 14: Heating and Cooling Equipment			
M1411.3.2	**NEW**	Drain pipe materials and sizes	New material and size requirements for components of the condensate disposal system.
Chapter 20: Boilers/Water Heaters			
M2001.3	**NEW**	Valves Boiler low-water cutoff	New requirements for boiler and water-heater shutoff valves and boiler low-water cutoff control.
M2004.1	M2004.1	Water heaters used for space heating/General	Water heaters used for space heating are now also required to conform to Chapter 28 (Water heaters).
M2006.1	M2006.1	Pool heaters/ General	Revised to require electric pool and spa heaters to be tested in accordance with UL 1261.
Chapter 21: Hydronic Piping			
M2101.10	**NEW**	Hydronic piping/ Tests	Requires testing of hydronic piping at a pressure of not less than 100 psi for not less than 15 minutes.
Chapter 22: Special Piping and Storage Systems			
M2202.3	M2202.3	Flexible connectors	Revised to required flexible connectors in special piping systems to be listed and labeled in accordance with UL 536.
M2204.1	M2204.1	Pumps	Revised to require automatic pumps utilized in special piping and storage systems to be listed and labeled in accordance with UL343.

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Chapter 24: Fuel Gas			
G2408.5	**NEW**	Clearances from grade	Equipment and appliances installed at grade level must be supported on a concrete slab or other approved material extending above adjoining grade or be suspended at least 6 inches above adjoining grade.
G2408.5	**NEW**	Clearances to combustible construction	Clearances to combustibles are required to be maintained as specified in the listing and manufacturer's instructions, as reduced in accordance with Section G2409.
G2434.1	G2433.1	Vented gas fireplaces/General	New section requires vented gas fireplace heaters to be installed in accordance with the manufacturer's installation instructions, tested in accordance with ANSI A21.50, and designed and equipped as specified in Section G2432.2.
Chapter 25: Plumbing Administration			
P2503.5.2	P2503.5.2	Finished plumbing	Revised to require the DDV system smoke-test to have a duration of not less than 15 minutes.
Chapter 26: General Plumbing Requirements			
P2602.2	**NEW**	Flood-resistant installation	New requirements for water-supply and sewage-disposal systems in areas prone to flooding.
Chapter 27: Plumbing Fixtures			
P2705.1	P2705.1	Installation/General	Revised to require not less than 15 inches from the centerline of a bidet to the outermost rim of an adjacent water closet. (Previously required 30 inches minimum center to center).
P2708.1	P2708.1	Showers/General	Revised to require a minimum of 900-square-inch area and 30 inches minimum dimension at the interior of showers, as measured at the top of the threshold, continued for a minimum height of 70 inches above the drain inlet.
P2714.2	**NEW**	Moveable sink systems	New section requires compliance with ASME A112.19.12.
P2722.1	P2722.1	Fixture fitting/ General	Revised to indicate that flexible water connections shall conform to Section P2904.7.
P2722.3	**NEW**	Individual pressure-balancing in-line valves for individual fixture fittings	Requires conformance with ASSE 1066 and installation in an accessible location. May not be substituted for shower values required by Section P2708.3.
P2724.1	**NEW**	Temperature-actuated, flow-reduction devices for individual fixtures	Requires conformance with ASSE 1062. May not be substituted for shower valves by Section P2708.3.
Chapter 28: Water Heaters			
P2801.4	P2801.4	Prohibited locations	Revised to provide prescriptive requirements for water heaters installed in dedicated enclosures.
P2802.2	P2802.2	Temperature control	Master thermostatic mixing valves, where required, shall comply with ASSE 1017 and temper the domestic water to 140 degrees F or less.
P2902.2.6	**NEW**	Double check-valve assemblies	Requires conformance with ASSE 1015 or ASSE 1048. Must be capable of operation under continuous pressure.
Table P2903.6.1	**NEW**	Conversion from W.S.F.U. to G.P.M. flow rates	New table addressing the need to convert W.S.F.U. to G.P.M. Table 2903.8.1 has been revised to reference this table for G.P.M. flow rates.
P2903.9.3	P2903.9.3	Valve requirements	Revised to require valves serving individual fixtures, appliances, risers, and branches to be provided with an individual shutoff valve on the water supply pipe, except at tubs and showers.
Tables P2904.4.1 P2904.5	**NEW**	Water service pipe Water distribution pipe	New tables referencing separate standards for water service and water distribution pipe.
P2904.5.1	P2904.5.1	Under concrete slabs	Revised to permit galvanized steel pipe in compliance with this section under concrete slabs.
P2904.7	**NEW**	Flexible water connections	New section references ASME A112.18.6 and requires access to all flexible water connectors.
P2904.17	**NEW**	Press joints	New section provides requirements for press-type mechanical joints in copper tubing.

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Chapter 30: Sanitary Drainage			
P3002.2	P3002.2	Building sewer	Revised to provide specific requirements for forced main sewer pipe.
P3005.1.1	P3005.1.1	Horizontal to vertical (multiple-connection fittings)	Revised to provide double sanitary tee pattern requirements.
P3005.1.7	**NEW**	Change in size	New section requires drainage piping not be reduced in size in the direction of flow. A 4-inch by 3-inch water closet connection, however, is not considered a reduction in size.
P3005.2	P3005.2	Drainage pipe cleanouts	Pressurized building drains and building sewers that convey the discharge of automatic pumping equipment to a gravity drainage system are now exempt from the requirements of this section.
P3005.4	P3005.4	Drain pipe sizing	Revised to indicate that drainage pipe size shall not be reduced in size in the direction of flow.
Chapter 31: Vents			
P3105.1	P3105.1	Distance of trap from vent	New exception does not limit the developed length of the fixture drain from trap weir to vent fitting for self-siphoning fixtures, such as water closets.
P3111.1	P3111.1	Type of fixtures	A combination waste and vent system shall not receive the discharge of a food waste grinder.
P3111.2	P3111.2	Installation	The maximum vertical distance for vertical pipe in a combination drain and vent system has been revised to 8 feet.
P3114.4	P3114.4	Location	Stack-type air admittance valves shall be located a minimum of 6 inches above the flood level rim of the highest fixture vented.
Chapter 38: Power and Lighting Distribution			
E3802.11	**NEW**	Bedroom outlets	New section requires arc-fault circuit interrupters in bedrooms for all branch circuits that supply 15- and 20-ampere receptacle outlets.
Chapter 43: Referenced Standards			
Revised and updated.			
Appendix G: Swimming Pools, Spas and Hot Tubs			
AG105.2	AG105.2	Outdoor swimming pool	Provides maximum mesh sizes for chain link fences serving as a required barrier.
AG106	**NEW**	Entrapment protection for swimming pool and spa suction outlets	Provides suction fitting, atmospheric vacuum relief system, dual drain separation and pool cleaner fitting requirements.
Appendix H: Patio Covers			
AH107	**NEW**	Special provisions for aluminum screen enclosures in hurricane-prone regions	Provides general requirements, definitions and structural design criteria for aluminum screen enclosures in hurricane-prone regions